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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHEEHAN, JOHN P

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 06/25/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,921

Applicant(s)

IKEGAMI, TAKASHI

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8 and 10-16 is/are rejected.
- 7) ☒ Claim(s) 3 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 7 is objected to because of the following informalities:
 - I. In amended claim 7, line 3, it appears that "area" should be --are a --.Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 11 to 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panchanathan (Panchanathan, US Patent No. 6,136,100).

Panchanathan teaches a process of making a passivated rare earth-iron-boron alloy powder comprising treating the alloy powder in an atmosphere having at least 50 percent and preferably 75 to 95 percent humidity at a temperature of 40 to 130°C (column 4, lines 8 to 12). Panchanathan teaches that the rare earth oxides in bonded magnets reacts with moisture (water) to convert the rare earth oxide to rare earth hydroxide that causes an expansion in the magnet causing eruptions in the magnet (column 1, lines 20 to 35). Panchanathan teaches that the purpose of the disclosed

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treatment in a high humidity atmosphere is to convert the rare earth oxide to a rare earth hydroxide while the alloy is in powder form prior to forming the magnet and thereby eliminating the formation of hydroxides after the magnet is formed and thereby eliminating the concomitant eruptions in the bonded magnet (column 1, lines 59 to 64). Panchanathan also teaches that the rare earth-iron-boron alloy powder can be produced by the rapid quenching method as recited in applicants' claim 16.

The claims and Panchanathan differ in that Panchanathan is silent with respect to the rare earth oxide and rare earth hydroxide content of the alloy powder.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because in view of Panchanathan's disclosure that the concentration of the rare earth oxide and hydroxide are result effective variables (column 1, lines 20 to 35), the optimization of result effective variables is obvious, *In re Aller*, 105 USPQ 233, 235 (CCPA 1955), and see MPEP 2144.05, IIA, for complete discussion of this principle.

4. Claims 7, 8, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panchanathan (Panchanathan, US Patent No. 6,136,100).

Panchanathan teaches and is applied as set forth above. For emphasis, it is repeated that Panchanathan teaches treating the alloy powder in an atmosphere having at least 50 percent and preferably 75 to 95 percent humidity at a temperature of 40 to 130°C (column 4, lines 8 to 12). The temperature range taught by Panchanathan overlaps the applicants' claimed temperature ranges of -10 to 200°C (applicants' claims 7 and 14) and 30 to 80°C (applicants' claims 8 and 15).

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The claims and Panchanathan differ in that Panchanathan discloses treating the powder in an atmosphere having at least 50 percent and preferably 75 to 95 percent humidity whereas the applicants claim the water vapor content of the treatment atmosphere in terms of millimeters of water vapor.

However one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because, with respect to the treatment temperature, a prima facie case of obviousness exists when, as in the instant case, the ranges of a claimed invention overlap the ranges disclosed in the prior art In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Regarding the water vapor content of the treatment atmosphere, it is the Examiner's position that Panchanathan's and applicants' water vapor content must overlap in that the purpose of the two processes are exactly the same and the treatment temperatures overlap, it stands to reason that the only other operating variable disclosed by applicants and Panchanathan, the water content of the treatment atmosphere, would be expected to overlap.

5. Claims 2, 4, 6 to 8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Panchanathan as applied to claims 1, 5, 7, 8 and 11 to 15 above, and further in view of Japanese patent Document No. 1-13207.

Panchanathan teaches and is applied as set forth above.

Japan '207 teaches coating a rare earth bonded magnet with an organic resin coating having a thickness of 1 to 50 microns as recited in applicants' claims so as to

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produce a magnet having good corrosion resistance and weatherability (see the Abstract).

Panchanathan and the claims differ in that Panchanathan does not teach coating the bonded magnet with an organic resin coating.

However one of ordinary skill in the art at the time the invention was made would have been motivated to coat Panchanathan's bond magnet with an organic resin coating so as to improve the corrosion resistance and weatherability of Panchanathan's magnet as taught by Japan '207.

Allowable Subject Matter

6. Claims 3 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

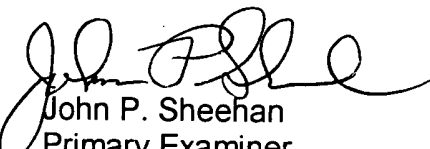
7. The following is a statement of reasons for the indication of allowable subject matter: The primary reason for indicating that claims 3 and 9 are directed to allowable subject matter is that none of the references alone or in combination teach or suggest a rare earth-iron-boron bond magnet made of a rare earth-iron-boron alloy powder as recited in claim 1 and further having a resin coating layer consisting of 2 to 70 wt.% fluorine resin, and 0.5 to 50 wt% pigment or 0.2 to 10 wt% of a metal complex dye or both and the remainder of at least one kind of acrylic resin, epoxy resin, phenol resin or polyester resin.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.


John P. Sheehan
Primary Examiner
Art Unit 1742

jps
June 23, 2003